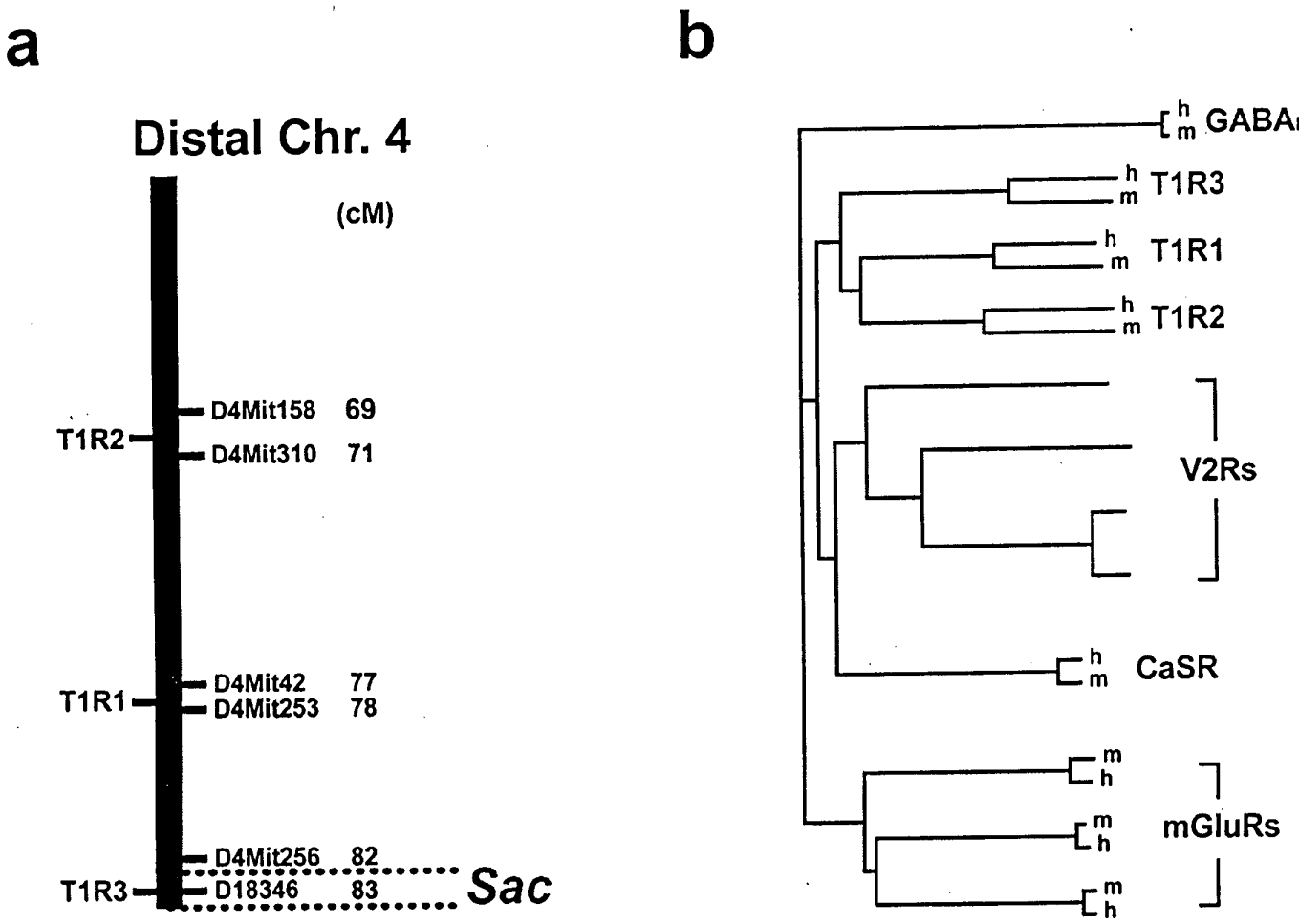
a
Distal Chr. 4
(cM)
T1R2
D4Mit158 69
D4Mit310 71
T1R1
D4Mit42 77
D4Mit253 78
T1R3
D4Mit256 82
D18346 83
Sac
b
h
m GABAB
h
m T1R3
h
m T1R1
h
m T1R2
V2Rs
h
m CaSR
m
h
m
h
m
h
mGluRs

figure 1

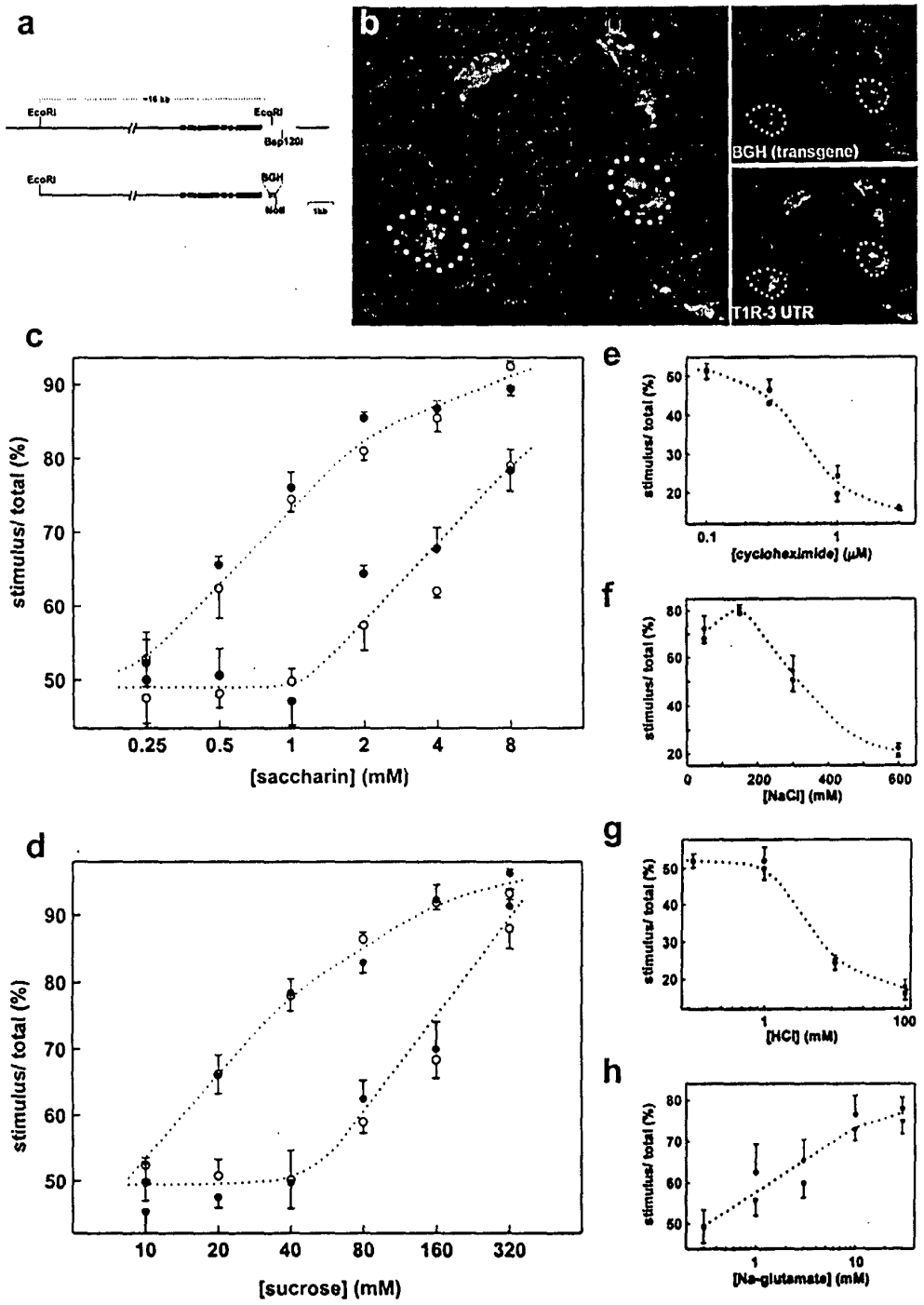
a
EcoRI
EcoRI
Bsp120I
EcoRI
BGH
NotI
b
BGH (transgene)
T1R-3 UTR
c
stimulus/ total (%)
[saccharin] (mM)
d
stimulus/ total (%)
[sucrose] (mM)
e
stimulus/ total (%)
[cycloheximide] (μM)
f
stimulus/ total (%)
[NaCl] (mM)
g
stimulus/ total (%)
[HCl] (mM)
h
stimulus/ total (%)
[Na-glutamate] (mM)

figure 2

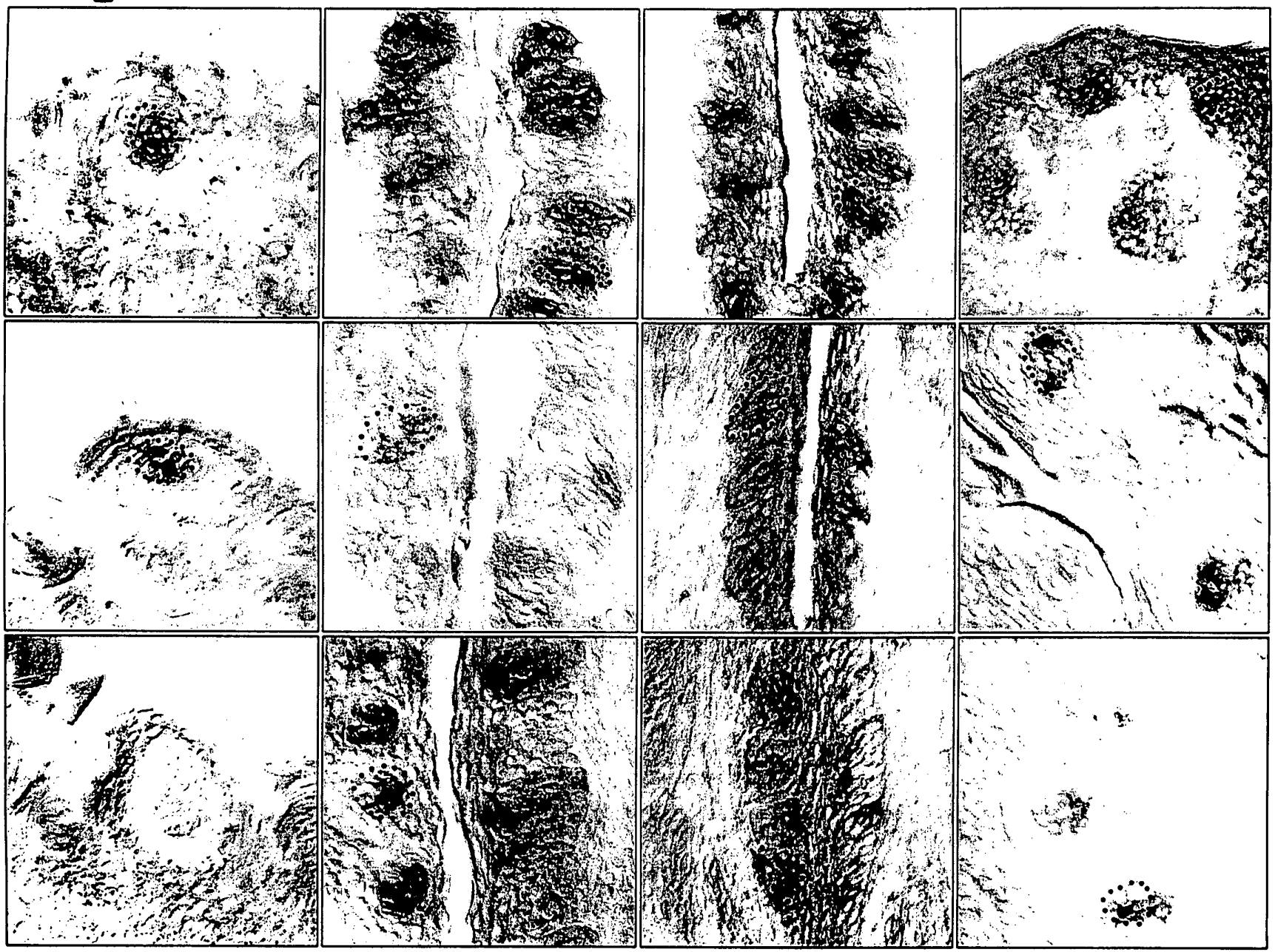

figure 3

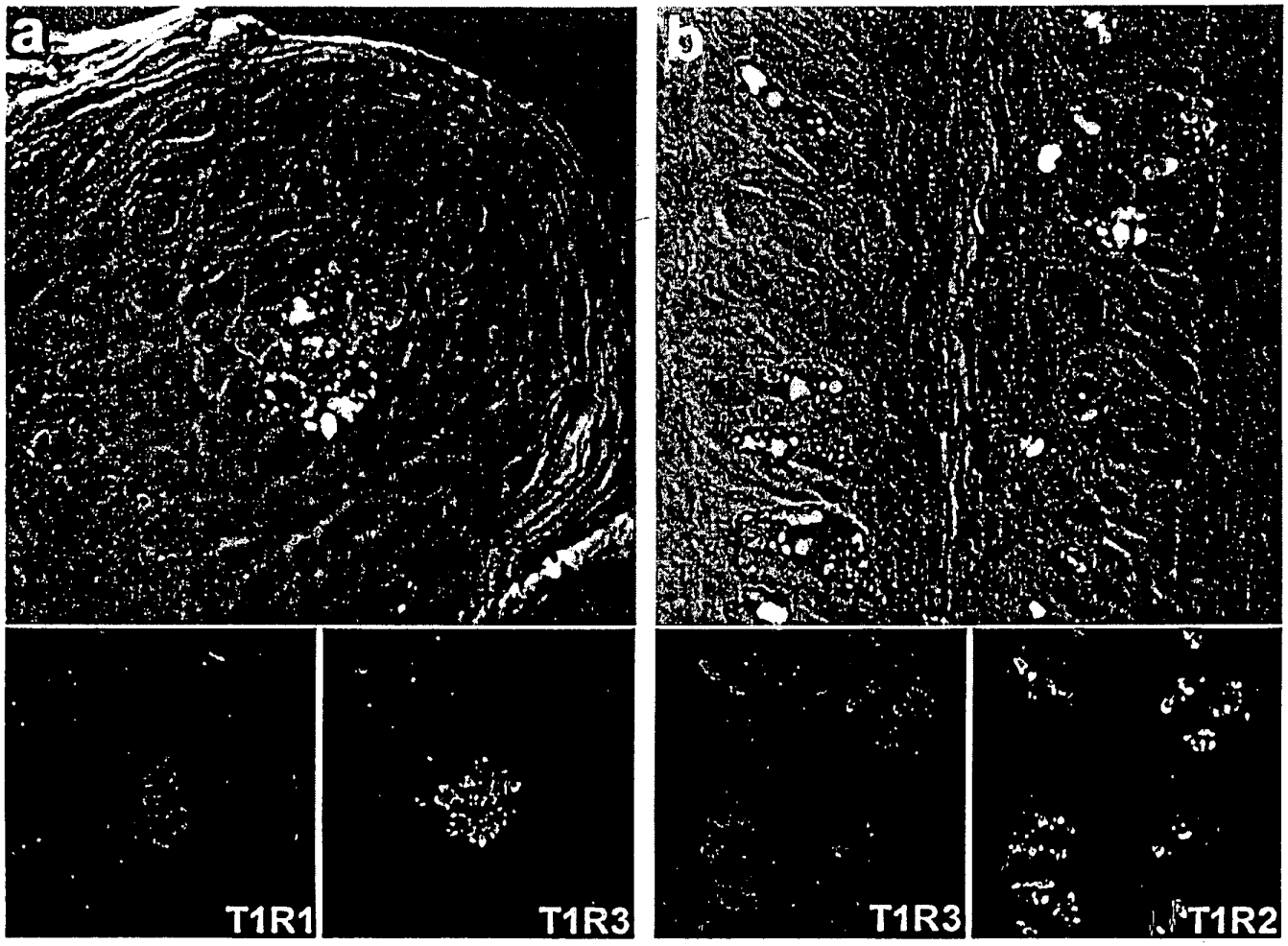

figure 4

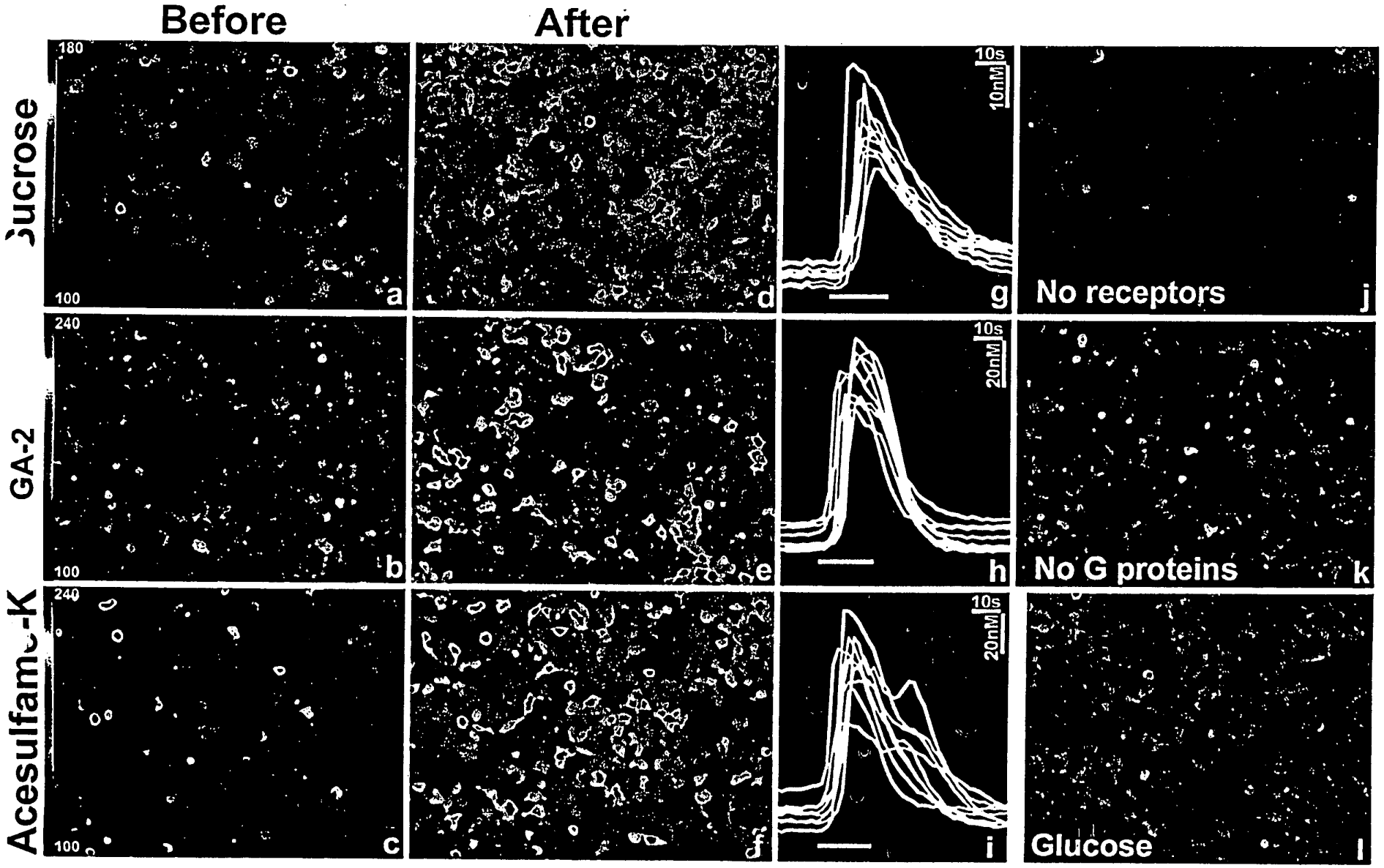
Before
After
Sucrose
GA-2
Acesulfame-K
180
100
240
100
240
100
10s
10nM
20nM
20nM
a
b
c
d
e
f
g
h
i
No receptors
No G proteins
Glucose
j
k
l

figure 5

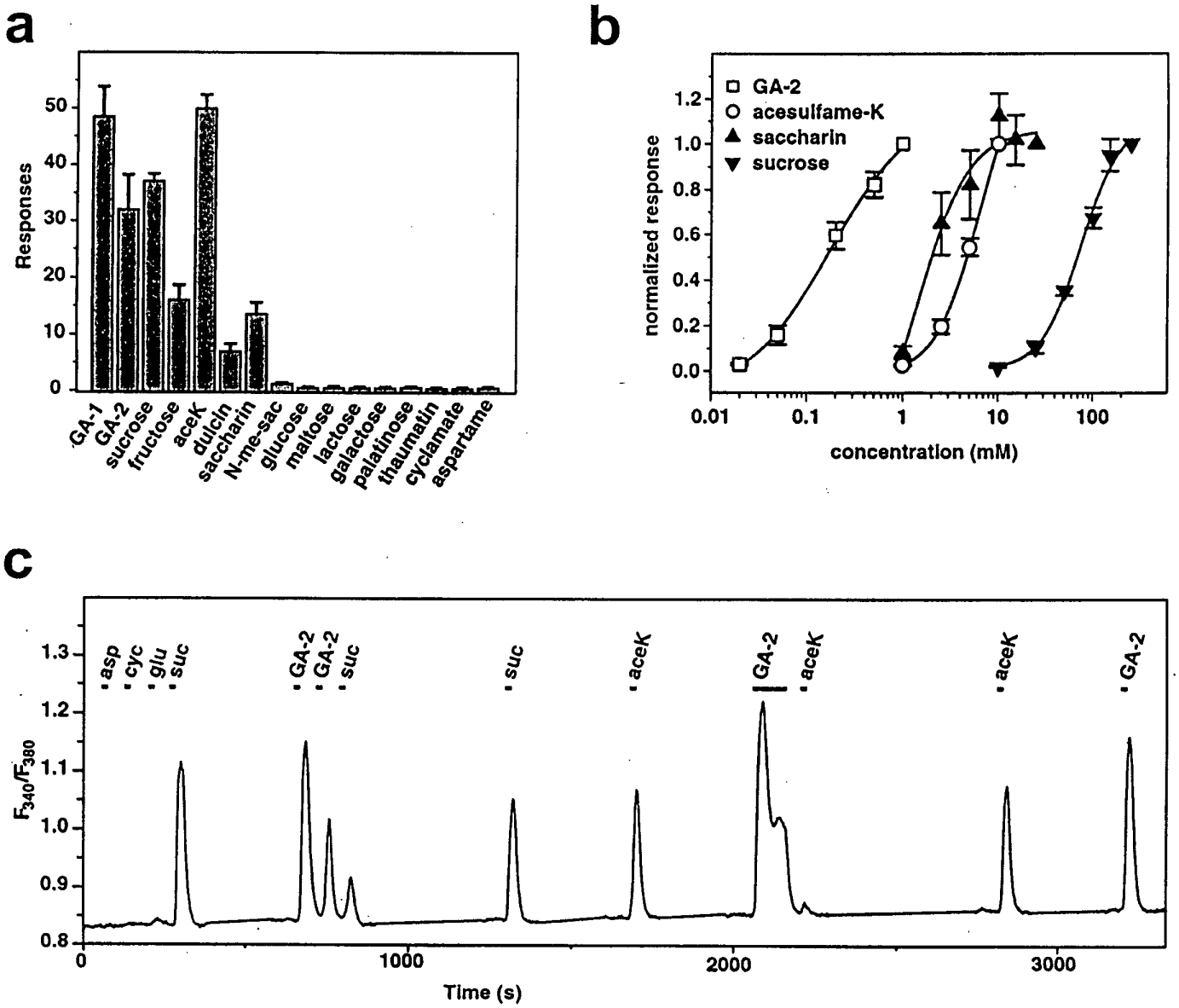
a
Responses
0
10
20
30
40
50
GA-1
GA-2
sucrose
fructose
aceK
dulcin
saccharin
N-me-sac
glucose
maltose
lactose
galactose
palatinose
thaumatin
cyclamate
aspartame
b
GA-2
acesulfame-K
saccharin
sucrose
normalized response
0.0
0.2
0.4
0.6
0.8
1.0
1.2
0.01
0.1
1
10
100
concentration (mM)
c
asp
cyc
glu
suc
GA-2
GA-2
suc
suc
aceK
GA-2
aceK
aceK
GA-2
F340/F380
0.8
0.9
1.0
1.1
1.2
1.3
0
1000
2000
3000
Time (s)

figure 6

figure 7